REMARKS/ARGUMENTS

Favorable reconsideration by the Examiner is respectfully requested in light of the foregoing amendments and the remarks which follow.

Abstract

A new abstract has been submitted to replace the previous abstract. It is believed that this new abstract fully complies with all applicable requirements.

Section 112 Enablement

Applicants have taken into account the Examiner's comments concerning the scope of original claim 1 and have significantly reduced the scope of this claim. In particular, applicants have limited claim 1 to the 25 amino acid peptide represented by SEQ ID NO: 1 and homologs of this peptide between 20 to 30 amino acids in length which exhibit 80% similarity with SEQ ID NO: 1.

We would point out that the current application as well as describing the characterisation of a peptide corresponding to SEQ ID NO: 1, also describes other variants such as the peptide of SEQ ID NO: 1 with an additional cysteine (example 3-1, paragraph 151) further supporting the scope of amended claim 1 as the specification describes several peptides which are within the scope of claim 1.

Given the limitation to the scope of claim 1, we now consider claim 1 to be fully enabled by the current application, given that the current application describes several ways in which the properties of the homologs protected by this claim could be manufactured (example 1 of current Patent application), characterised and compared (examples 3 – 5, 7 – 8 of current Patent application) to the peptide of SEQ ID NO: 1. The scope of this claim is now commensurate with the contribution of the current patent application to the art.

Section 112 Clarity

Claim 1 has been amended to closed language, meaning that the compound of claim 1 consists of either a peptide of SEQ ID NO: 1 consisting of 25 amino acid residues or a peptide homolog with 80% similarity to SEQ ID NO: 1 and of between 20 and 30 amino acid residues.

The Examiner's concerns regarding the chemical analogs claimed by old claim 1 are no longer relevant as this portion of the claim has been deleted.

Claim 2 has been deleted and so the examiners objections to the wording of this claim are no longer relevant. Likewise, claims 5 has been cancelled, thereby removing the ambiguity from the original claim set identified by the Examiner.

The applicants disagree that claim 6 introduces a similar ambiguity to claim 5, as claim 6 relates to the coupling of a carrier protein to the compound of claim 1. The resulting molecule is not a single peptide comprising a single amino acid residue backbone, as for instance is the PPL protein, but instead is a first peptide as specified in claim 1 coupled to a protein such as KLH or BSA by chemical means. Therefore, although the compound of claim 1 coupled to a carrier protein will comprise more than the number of residues of the compound of claim 1 alone, this is not the same as the compound of claim 1 itself comprising additional amino acid residues as per claim 5. Claim 6 thus represents a further limitation upon the subject matter defined in claim 1, and thereby clearly complies with the requirement of 37 C.F.R. 1.75(c) that a dependent claim should refer back to and further limit a parent claim.

Claim 21 has been amended so as to claim a 'compound' as per claim 1 removing any ambiguity from this feature. Claim 21 has also been amended to specify that the composition comprises a compound according to claim 1 in combination with a 'carrier', basis for this amendment can be found at paragraph 104 of the published version of this Patent application. The pharmaceutical composition of claim 21 is now defined as comprising the compound of claim 1 in combination with a pharmaceutically acceptable carrier and therefore is administrable to a subject in need thereof.

Section 102(b) Novelty

Claim 1 as amended now relates only to peptides consisting of SEQ ID NO: 1 or to homologs thereof comprising between 20 - 30 amino acid residues and having at least 80% similarity therewith.

The prior art disclosure WO 01/59123 describes the complete PPL protein which is 32 kDa in weight, consists of 280 amino acid residues and corresponds to SEQ ID NO: 7. In

particular WO 01/59123 describes the effects of administering the complete PPL protein as a component of an Adenovirus, to an animal so as to generate immunity to Leptospirosis.

Therefore the peptide of claim 1, although contained within the complete PPL protein described in WO 01/59123, is not itself described therein and claim 1 is therefore novel with respect to WO 01/59123.

Section 103 Non-obviousness

The invention as defined in the claims is also non-obvious with respect to this prior art document. As outlined in the current application, the predictability of antigen/vaccine creation strategies is very low and so it was not therefore expected that a small fragment of the complete PPL would induce immunity to the pathogenic bacteria responsible for Leptospirosis. The finding by the inventors that the peptide of SEQ ID NO: 1 is useful for a number of diagnostic and therapeutic methods was not predictable from WO 01/59123 and it is only via the application of the inventor's skill and efforts that the present invention has been arrived at.

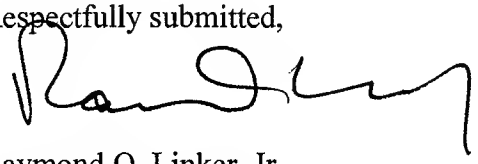
Conclusions

Applicants respectfully submit that the amendments to claim 1 overcome all of the outstanding objections to the current patent application. We therefore look forward to receiving formal notification of the allowability of all claims as now presented.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required

therefor (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



Raymond O. Linker, Jr.
Registration No. 26,419

Customer No. 00826
ALSTON & BIRD LLP
Bank of America Plaza
101 South Tryon Street, Suite 4000
Charlotte, NC 28280-4000
Tel Charlotte Office (704) 444-1000
Fax Charlotte Office (704) 444-1111

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